

## Introduction

- **Overview** - This process will cover how to make a paper airplane.
- **Theory** - The theory behind why a paper airplane (or any airplane for that matter) can fly through the air lays in the “Lift” force. Air flowing over the fixed wing of an airplane exerts a perpendicular force to the airflow. Lift is the force that allows a paper airplane to glide through the air.

## Discussion

- **Dangers / cautions** - Handle paper with care to avoid paper cuts. Be careful when throwing paper airplane to avoid contact with eyes. If using scissors, be sure to keep fingers clear of blades.
- **Equipment** - One (1) 8 ½ in x 11 in sheet of standard paper. Paper clip and scissors if desired.
- **Step 1**
  - In this first step the body of the paper airplane will be created.
  - Fold paper in half vertically (in the manner commonly referred to as “hot dog” style). Ensure that the two halves of the paper are sized equally and that their edges line up straight. Ensure that the fold stays in place by sharply creasing the fold with a fingernail or coin.
  - Result (Image / Video)
- **Step 2**
  - With the body of the airplane created, it is now time to start building the wings of the paper airplane.
  - Lay the folded paper in front of you lengthwise with the opening created by the fold pointing away from you. Fold one corner of the paper down towards the bottom of the airplane, aligning what was once the top edge of the of airplanes body with the crease made in step one. Flip the airplane over and repeat this process on the other side (folding down the same side of the airplane as before).
  - Result (Image / Video)
- **Step 3**
  - This steps continues the process of creating the wings of the airplane.
  - Similarly to the previous step, fold the open edges of the paper down to make the angled edge flush with the bottom of the paper as shown below.
  - Result (Image / Video)
- **Step 4**
  - With just one final fold, each wing is finalized in this last step.
  - Fold the open edges down yet again, creating the wings of the airplane. Crease sharply and then fold these edges back up to give the wings their appropriate shape. See below for an example.
  - Result (Image / Video)
- **Step 5**
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- Congratulations! It is now time to test your paper airplane!
- Hold the plane parallel to the ground and gently release the paper airplane in a gentle swoop of the arm towards an area vacant of people to avoid injury.
- **Step 6**
  - If desired flight results are not achieved, consider adding a paper clip to the airplane. If the airplane tends to fly upwards, add the paper clip to the front of the plane. If the airplane tends to fly downwards, add the paper clip to the rear of the plane. See examples below for both.
  - Result (Image / Video)
- **Step 7**
  - Once you have made revisions to the paper airplane, go ahead and test it again as you did in step 5.

## **Conclusion**

- **Summary** - This comprehensive paper airplane folding guide walked through the numerous steps required to successfully create a paper airplane. Lastly, instructions for proper throwing of the paper airplane were also provided.
- **Information** - For additional information on creating other awesome paper airplane designs, check out *foldnfly.com*.